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Mui

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(54) **GRAPHICAL USER INTERFACE FOR PROGRAMMING UNIVERSAL REMOTE CONTROL DEVICES**

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G05B 11/01 (2006.01)

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USPC **340/12.23**; 340/12.22; 340/426.14; 340/539.19; 340/10.51; 348/734; 341/176

(58) **Field of Classification Search**
CPC G08C 2201/20; G08C 2201/21; G08C 2201/30; G08C 2201/92; H04N 21/42225; H04N 21/42226
USPC 340/825, 539.19, 426.14, 426.35, 340/10.51, 7.39, 5.2, 5.21–5.25, 340/12.22–12.23; 348/734; 341/176; 725/46, 47
See application file for complete search history.

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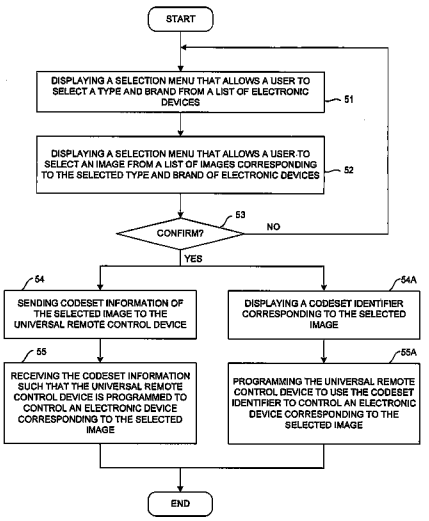
(57) **ABSTRACT**

A universal remote control (URC) is programmed to control a particular type and make of electronic consumer device using a graphical user interface. A plurality of images is displayed on the user interface. Each image of the plurality of images is a digital photograph of an electronic consumer device or a remote control device usable to control the corresponding electronic consumer device. A user selects the digital photograph of the particular type and make of electronic consumer device or its corresponding remote control device. Codeset information associated with the selected device is transmitted to the URC such that the URC is programmed to control the selected device. If the codeset information is a codeset identifier, then it is displayed on the user interface. The user enters the codeset identifier into the URC such that the URC is programmed to control the selected device.

17 Claims, 5 Drawing Sheets


START
DISPLAYING A SELECTION MENU THAT ALLOWS A USER TO SELECT A TYPE AND BRAND FROM A LIST OF ELECTRONIC DEVICES
51
DISPLAYING A SELECTION MENU THAT ALLOWS A USER TO SELECT AN IMAGE FROM A LIST OF IMAGES CORRESPONDING TO THE SELECTED TYPE AND BRAND OF ELECTRONIC DEVICES
52
CONFIRM?
53
NO
YES
54
SENDING CODESET INFORMATION OF THE SELECTED IMAGE TO THE UNIVERSAL REMOTE CONTROL DEVICE
54A
DISPLAYING A CODESET IDENTIFIER CORRESPONDING TO THE SELECTED IMAGE
55
RECEIVING THE CODESET INFORMATION SUCH THAT THE UNIVERSAL REMOTE CONTROL DEVICE IS PROGRAMMED TO CONTROL AN ELECTRONIC DEVICE CORRESPONDING TO THE SELECTED IMAGE
55A
PROGRAMMING THE UNIVERSAL REMOTE CONTROL DEVICE TO USE THE CODESET IDENTIFIER TO CONTROL AN ELECTRONIC DEVICE CORRESPONDING TO THE SELECTED IMAGE
END

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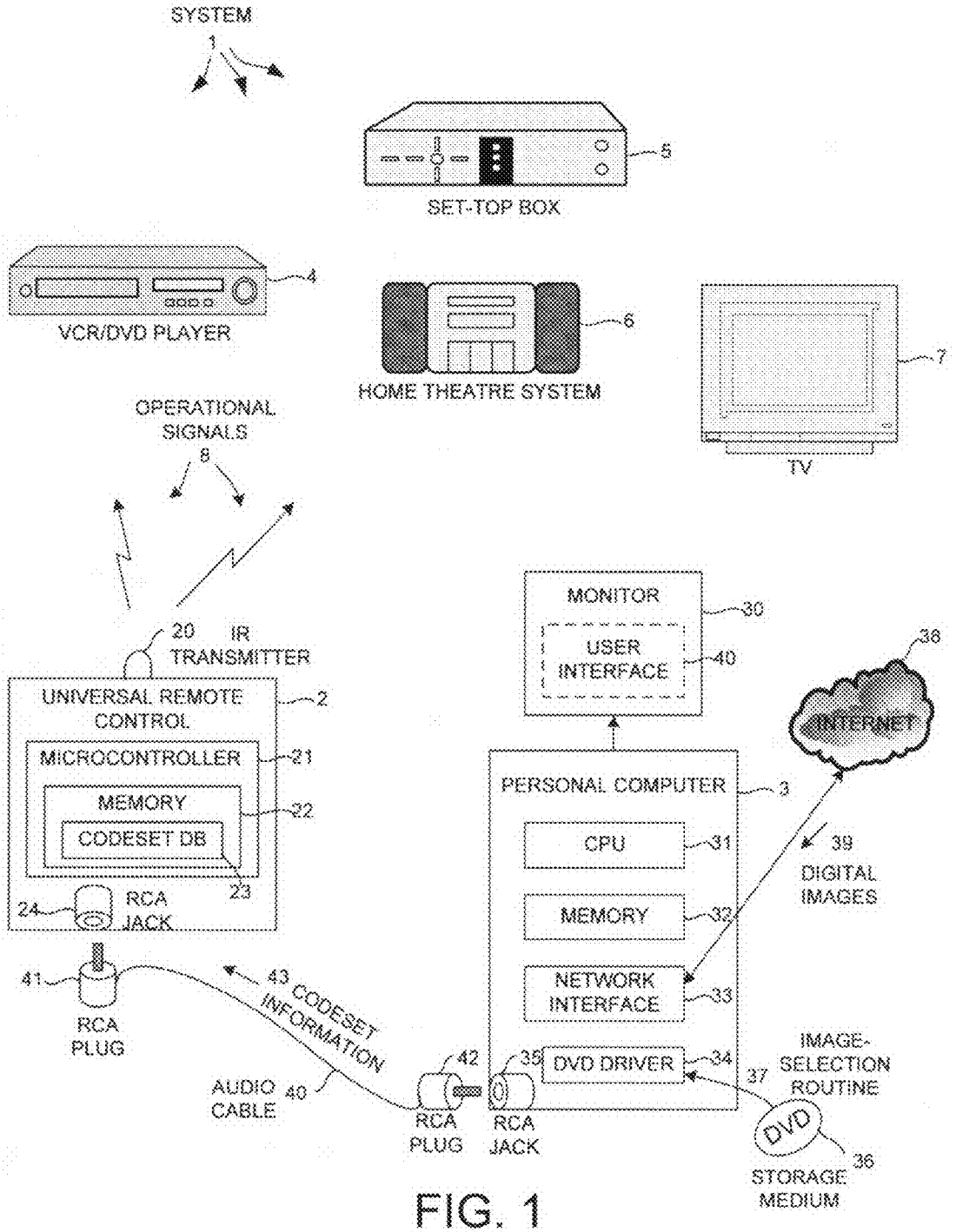
SYSTEM
1
5
SET-TOP BOX
4
VCR/DVD PLAYER
6
HOME THEATRE SYSTEM
7
TV
OPERATIONAL SIGNALS
8
20
IR TRANSMITTER
UNIVERSAL REMOTE CONTROL
2
MICROCONTROLLER
21
MEMORY
22
CODESET DB
23
24
RCA JACK
41
RCA PLUG
43
CODESET INFORMATION
AUDIO CABLE
40
42
RCA PLUG
35
RCA JACK
MONITOR
30
USER INTERFACE
40
38
INTERNET
PERSONAL COMPUTER
3
CPU
31
MEMORY
32
NETWORK INTERFACE
33
DVD DRIVER
34
39
DIGITAL IMAGES
37
IMAGE-SELECTION ROUTINE
DVD
36
STORAGE MEDIUM

FIG. 1

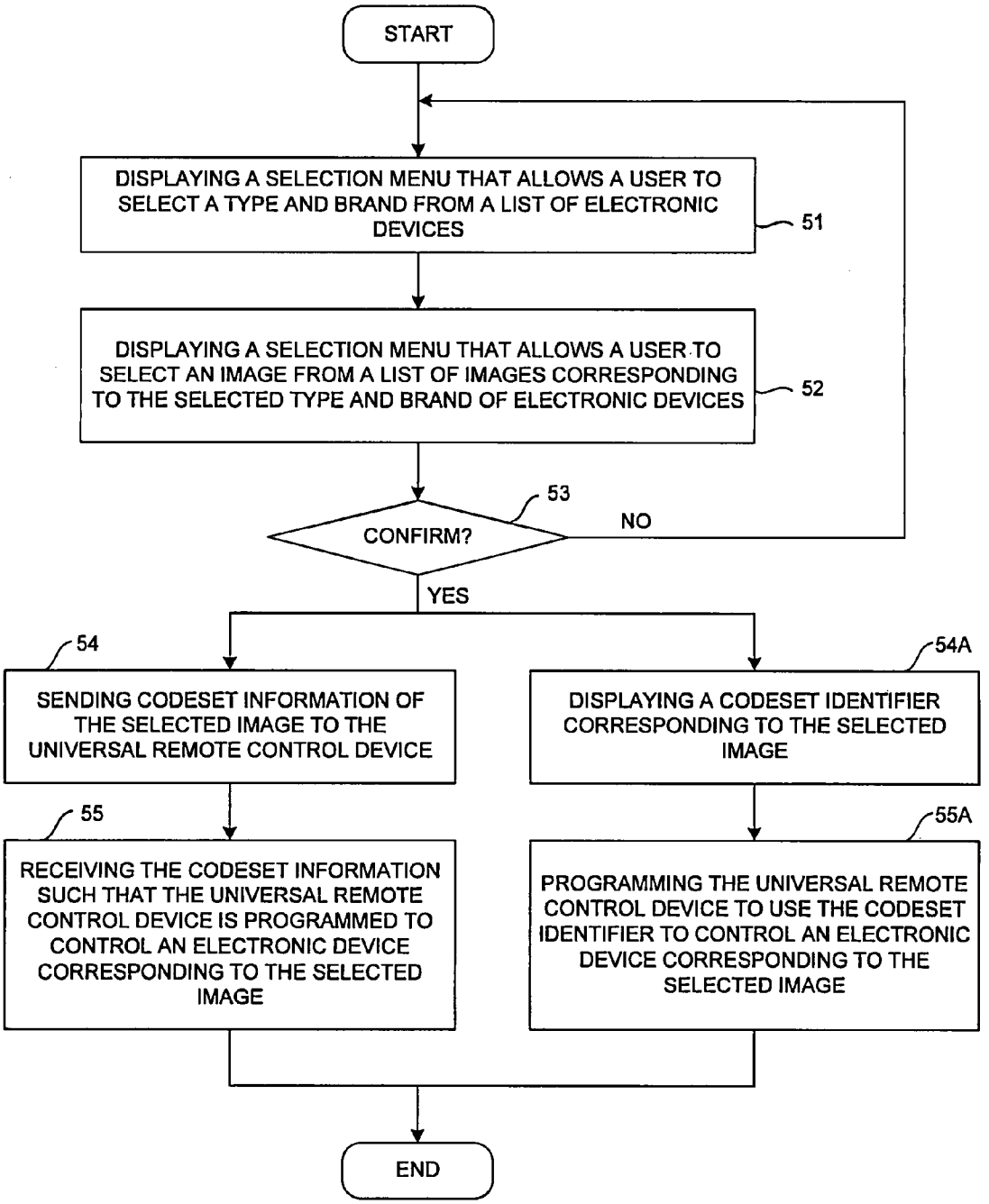
START
DISPLAYING A SELECTION MENU THAT ALLOWS A USER TO SELECT A TYPE AND BRAND FROM A LIST OF ELECTRONIC DEVICES
51
DISPLAYING A SELECTION MENU THAT ALLOWS A USER TO SELECT AN IMAGE FROM A LIST OF IMAGES CORRESPONDING TO THE SELECTED TYPE AND BRAND OF ELECTRONIC DEVICES
52
53
CONFIRM?
NO
YES
54
SENDING CODESET INFORMATION OF THE SELECTED IMAGE TO THE UNIVERSAL REMOTE CONTROL DEVICE
54A
DISPLAYING A CODESET IDENTIFIER CORRESPONDING TO THE SELECTED IMAGE
55
RECEIVING THE CODESET INFORMATION SUCH THAT THE UNIVERSAL REMOTE CONTROL DEVICE IS PROGRAMMED TO CONTROL AN ELECTRONIC DEVICE CORRESPONDING TO THE SELECTED IMAGE
55A
PROGRAMMING THE UNIVERSAL REMOTE CONTROL DEVICE TO USE THE CODESET IDENTIFIER TO CONTROL AN ELECTRONIC DEVICE CORRESPONDING TO THE SELECTED IMAGE
END

FIG. 2

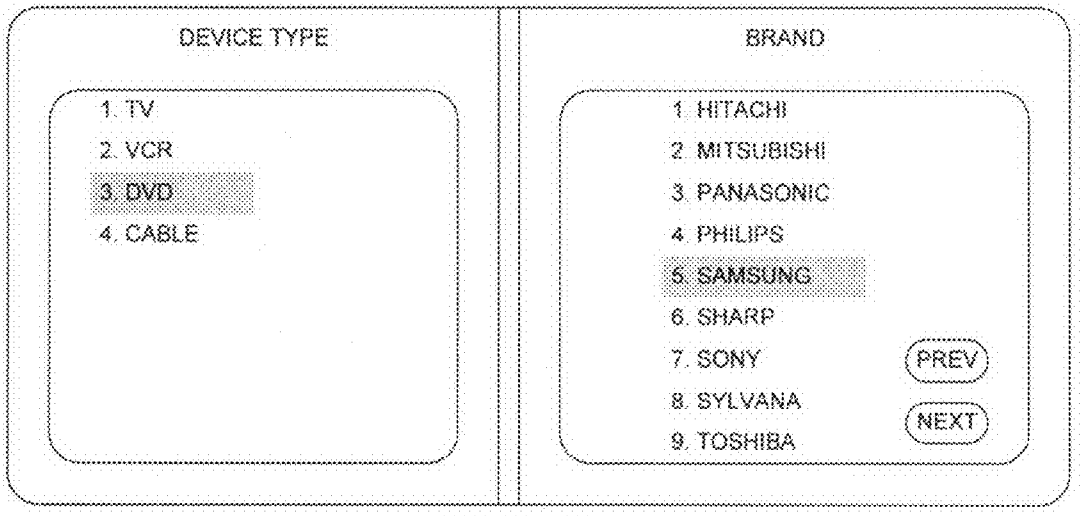
DEVICE TYPE
1. TV
2. VCR
3. DVD
4. CABLE
BRAND
1. HITACHI
2. MITSUBISHI
3. PANASONIC
4. PHILIPS
5. SAMSUNG
6. SHARP
7. SONY
8. SYLVANA
9. TOSHIBA
PREV
NEXT

FIG. 3

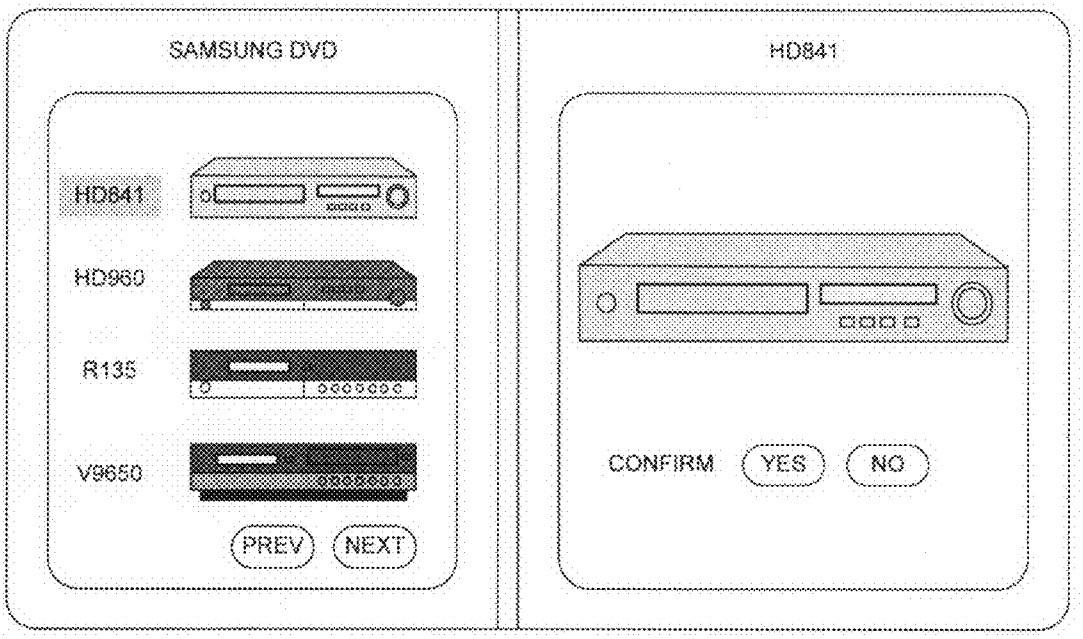
SAMSUNG DVD
HD841
HD960
R135
V9650
PREV
NEXT
HD841
CONFIRM
YES
NO

FIG. 3A

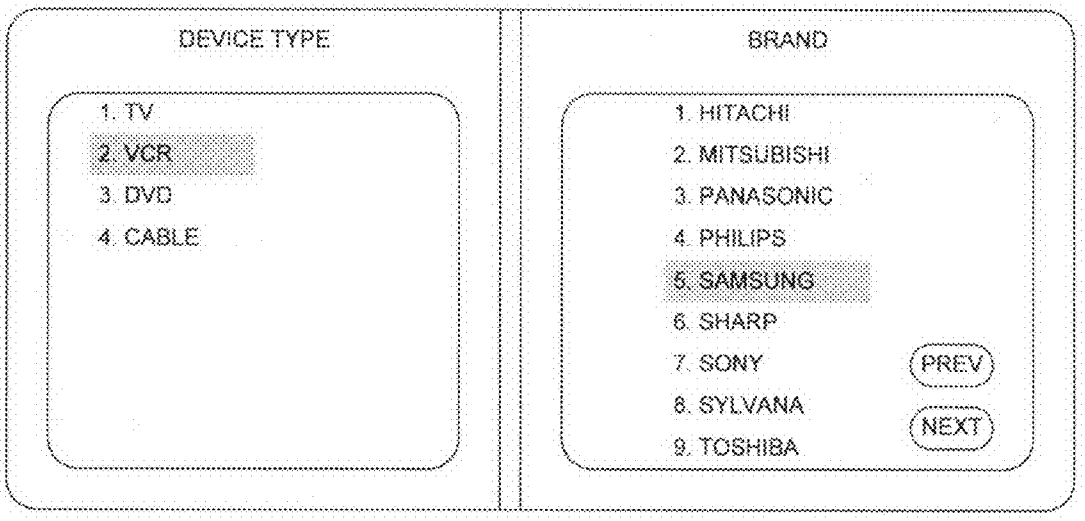
DEVICE TYPE
1. TV
2. VCR
3. DVD
4. CABLE
BRAND
1. HITACHI
2. MITSUBISHI
3. PANASONIC
4. PHILIPS
5. SAMSUNG
6. SHARP
7. SONY
8. SYLVANA
9. TOSHIBA
PREV
NEXT

FIG. 4

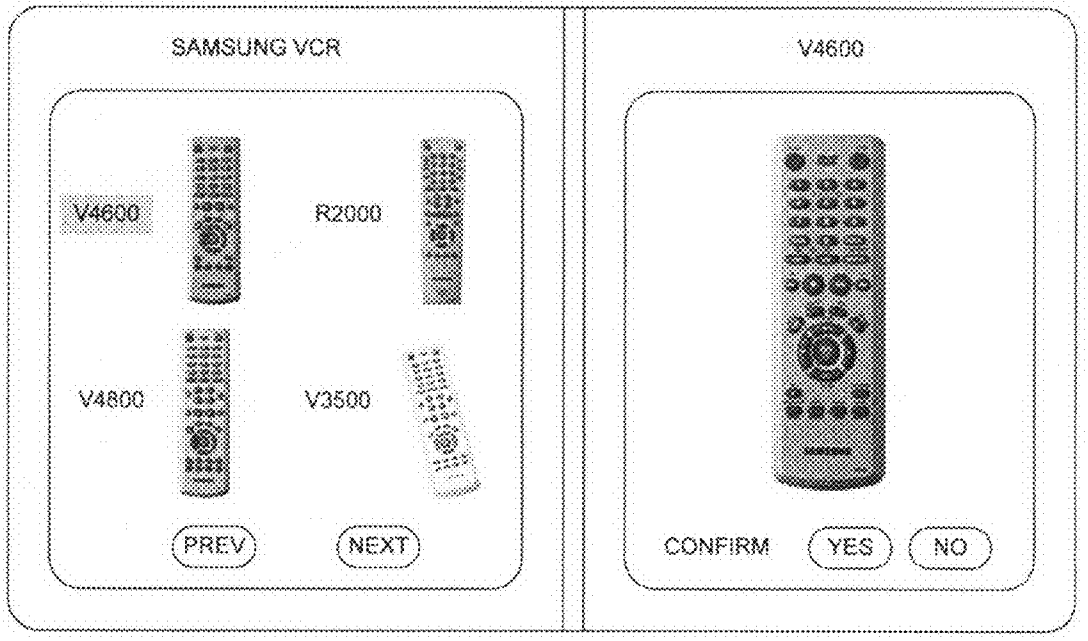
SAMSUNG VCR
V4600
R2000
V4800
V3500
PREV
NEXT
V4600
CONFIRM
YES
NO

FIG. 4A

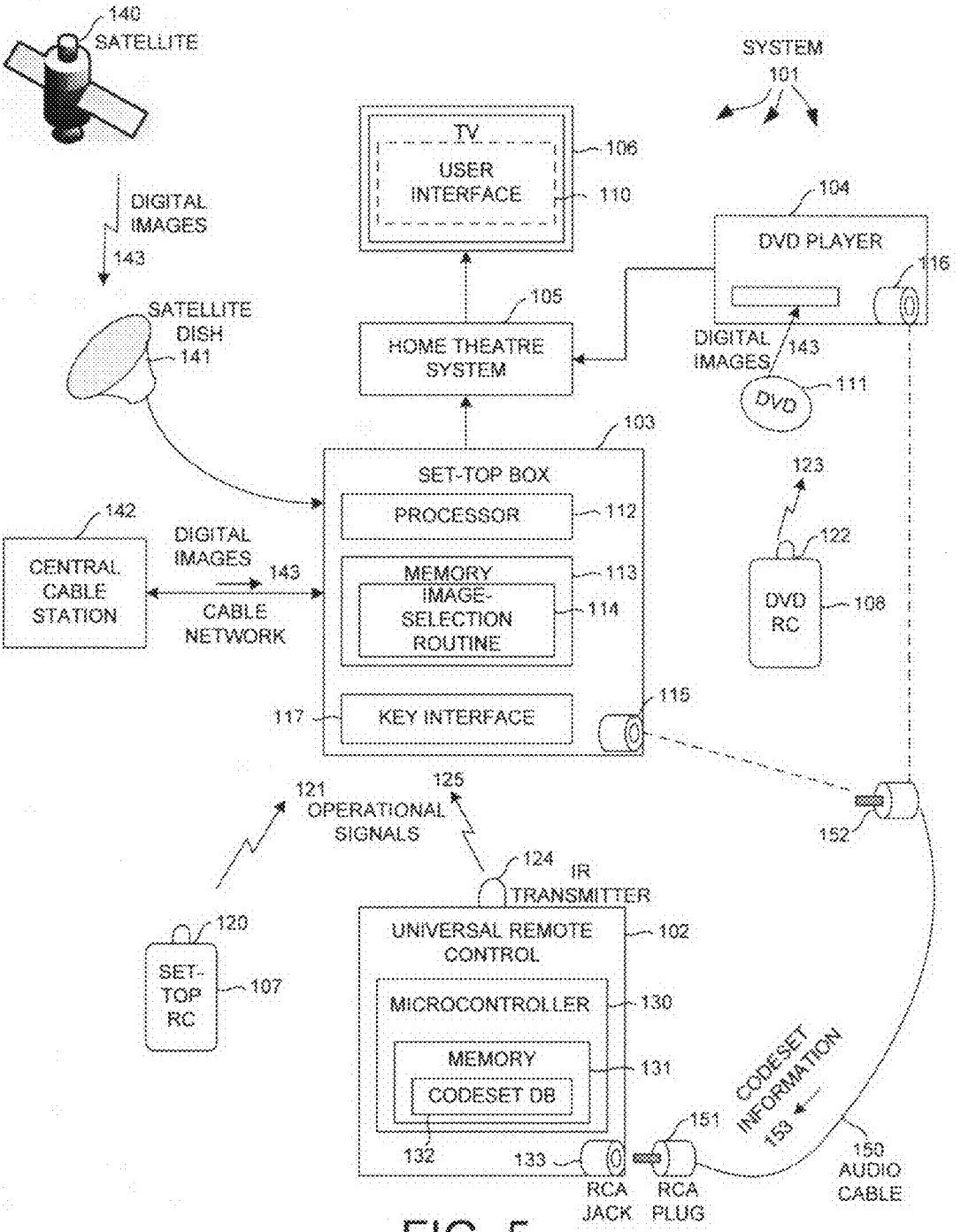
140
SATELLITE
SYSTEM
101
TV
106
USER INTERFACE
110
DIGITAL IMAGES
143
104
DVD PLAYER
116
SATELLITE DISH
141
105
HOME THEATRE SYSTEM
DIGITAL IMAGES
143
DVD
111
103
SET-TOP BOX
123
142
PROCESSOR
112
122
DIGITAL IMAGES
143
CENTRAL CABLE STATION
MEMORY
113
IMAGE-SELECTION ROUTINE
114
DVD RC
108
CABLE NETWORK
117
KEY INTERFACE
115
121
OPERATIONAL SIGNALS
125
152
124
IR TRANSMITTER
120
UNIVERSAL REMOTE CONTROL
102
SET-TOP RC
107
MICROCONTROLLER
130
MEMORY
131
CODESET DB
CODESET INFORMATION
153
151
132
133
150
AUDIO CABLE
RCA JACK
RCA PLUG

FIG. 5

GRAPHICAL USER INTERFACE FOR PROGRAMMING UNIVERSAL REMOTE CONTROL DEVICES

TECHNICAL FIELD

The disclosed embodiments relate to methods for programming a universal remote control device.

BACKGROUND

A universal remote control (URC) device transmits operational signals to control one or more electronic consumer devices such as TVs, VCRs; set-top boxes, audio home theatre systems, and CD/DVD players. A particular brand and make of electronic consumer device responds to operational signals containing a particular set of keycodes and performs the corresponding functions. In order to provide the functionality of a URC device, various types of keycodes are stored in codesets as a codeset database format. Each codeset is identified by a three digit codeset identifier associated with a particular brand and make of electronic consumer device. A URC device generally stores hundreds of codesets in a codeset database and is programmed to use one particular codeset to control one particular electronic consumer device.

Typically, a user is provided with a manual which includes a list of codeset identifiers corresponding to various electronic consumer devices. The user uses the manual to determine the correct codeset identifier corresponding to each electronic consumer device to be controlled, and then manually enters that codeset identifier into the URC device. This process is tedious and time-consuming. Further, if the manual of for the URC device is lost, then the user will have no way to program the URC device except by obtaining another manual (for example, from the manufacturer or by calling customer service center to get programming instructions). In addition, the codeset that may be selected for use by the URC device is limited to the codesets stored in the codeset database and provided in the manual. The URC device needs a relatively large amount of memory to store the entire codeset database and providing this large amount of memory increases the cost of the URC device.

Some URC devices have the capability of being programmed without requiring the user to enter a codeset identifier manually. This type of URC device is typically able to operate in an "auto search" mode such that the user does the auto search to find the desired codeset. However, auto search requires the user to take multiple programming steps to set up the auto search. Scanning through the entire codeset database is also time-consuming. Thus, a market exists for a universal remote control device that can be easily programmed, whereby a user will not need to determine a codeset identifier from a user manual.

SUMMARY

A universal remote control (URC) is programmed to control a particular type and make of electronic consumer device using a graphical user interface. In one embodiment, a user interface is displayed on a display screen. The user interface includes a plurality of images which are digital photographs of electronic consumer devices or remote control devices that are used to control the corresponding electronic consumer devices. The digital photographs are displayed in a prioritized order based on market popularity of the corresponding electronic consumer devices. A user views the display screen and selects the digital photograph of the particular type and make of electronic consumer device to be controlled (or its corresponding remote control device that is to be programmed). Codeset information associated with the selected device is outputted to the URC such that the URC is programmed to control the selected device.

An exemplary device comprises a memory, and a processor for executing an image-selection routine that displays a plurality of images on a display screen and outputs codeset information in response to a selection of one of the plurality of images. Each image of the plurality of images is a digital photograph of an electronic consumer device or a remote control device usable to control the electronic consumer device. In one example, the digital photographs of the plurality of images are stored in the memory as compressed digital image files. In another example, the digital photographs are received from a centralized location such as a central cable network.

The selected image corresponds to the particular type and make of electronic consumer device to be controlled by the URC. Codeset information is either a codeset identifier or a codeset associated with the selected device. In one embodiment, the codeset information is transmitted to the URC though an audio connection. By providing an audio connector in the URC, the URC can receive the codeset information across the audio connection and is automatically programmed to control the selected device. In another embodiment, the codeset information is a codeset identifier and is displayed on the display screen. The user views the codeset identifier (for example, a three-digit code) on the display screen, and then manually enters the codeset identifier into the URC to program the URC to control the selected device.

In one advantageous aspect, besides the codeset information, device information including device description information and device behavior characteristics information can also be transmitted to the URC through an audio connection.

Other embodiments and advantages are described in the detailed description below. This summary does not purport to define the invention. The invention is defined by the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings, where like numerals indicate like components, illustrate embodiments of the invention.

FIG. **1** illustrates a system in accordance with one novel aspect.

FIG. **2** is a flowchart of a method for programming a universal remote control device.

FIG. **3** is an example of a first selection menu of a user interface that is involved in the method for programming a universal remote control device.

FIG. **3**A is an example of a second selection menu of a user interface that is involved in the method for programming a universal remote control device.

FIG. **4** is another example of a first selection menu of a user interface.

FIG. **4**A is another example of a second selection menu of a user interface.

FIG. **5** illustrates a system in accordance with one novel aspect.

DETAILED DESCRIPTION

Reference will now be made in detail to some embodiments of the invention, examples of which are illustrated in the accompanying drawings.

FIG. **1** is a diagram of a system **1** in accordance with one novel aspect. System **1** includes a universal remote control

(URC) device **2**, a personal computer (PC) **3** and several electronic consumer devices including: a VCR/DVD player **4**, a set-top box **5**, an audio home-theatre system **6**, and a television **7**. URC **2** emits operational signals **8** from an IR transmitter **20** to control electronic consumer devices. URC **2** includes a microcontroller **21**, memory **22**, and an RCA jack **24**. Memory **22** contains a codeset database **23**. (For additional information including examples of a codeset database and the content of a codeset and related information on how to use a codeset to generate an IR operational signal, see: U.S. patent application Ser. No. 10/777,023, entitled "Interactive Web-Based Codeset Selection and Development Tool", by Lee et al., filed Feb. 20, 2004 (the entire subject matter of which is incorporated herein by reference)). PC **3** is coupled to a monitor having a display screen **30**. PC **3** is also coupled to a storage medium (for instance, a DVD disc as illustrated) **36**. PC **3** is of typical PC construction and includes a CPU **31**, memory **32**, a network interface **33**, a storage device (for instance, a DVD driver as illustrated) **34**, and a audio OUT RCA jack **35**. PC **3** is connected to a network (for instance, the internet as illustrated) **38**. PC **3** receives digital images **39** from internet **38** through a network connection. PC **3** also transmits codeset information **43** to URC **2** through an audio cable **40**. Audio cable **40** has two RCA plugs **41** and **42**. RCA plug **41** is plugged into RCA jack **24** of URC **2**, and RCA plug **42** is plugged into RCA jack **35** of PC **3**.

FIG. **1** illustrates a method of using PC **3** to program URC **2** to control a particular brand and make of electronic consumer device. A user inserts DVD optical disc **36** into DVD driver **34** of PC **3**. DVD disc **36** contains an image-selection routine **37** that is executable on CPU **31** of PC **3**. PC **3** loads image-selection routine **37** from DVD disc **36**. CPU **31** then executes image-selection routine **37** and displays a user interface **40** on display screen **30**. The user then uses either a mouse or a keyboard or other user input device to interact with user interface **40** and to make selections.

FIG. **2** is a flow chart of a method of programming URC **2** illustrated in FIG. **1**. FIG. **3** and FIG. **3**A are examples of screen displays of user interface **40** that are involved in the method of FIG. **2**. In the example of FIG. **3**, CPU **31** executes image-selection routine **37** and displays a first selection menu of user interface **40** on display screen **30** (step **51** of FIG. **2**). The first selection menu allows the user to select a device type from a list of device types such as TV, VCR, DVD, and cable set-top box. The first selection menu also allows the user to select a brand name from a list of manufacturers such as Hitachi, Mitsubishi, Panasonic, Philips and more. The user can select the "next" option to go to next page for more brand name selections, or select the "prev" option to go back to the previous page. As illustrated in FIG. **3**, if the user wants to program URC **2** to control a SAMSUNG DVD device, then the user selects device type DVD and brand name SAMSUNG.

After the user selects device type DVD and brand name SAMSUNG, a second selection menu of user interface **40** is displayed on display screen **30** (step **52** of FIG. **2**). In the example of FIG. **3**A, the second selection menu displays photographs of all DVD devices that are manufactured by SAMSUNG. The user uses the user interface to select a photograph of the SAMSUNG DVD device to be controlled. The user browses through all the photographs by selecting the "prev" and "next" options. As illustrated in FIG. **3**A, the user picks model HD841. The photograph of SAMSUNG DVD model HD841 is then enlarged for further verification. If the photograph of HD841 looks the same as the SAMSUNG DVD device to be controlled by URC **2**, then the user confirms the selection of DVD HD841 by selecting the "yes" option (step **53** of FIG. **2**).

In the example of FIG. **3**A, the images displayed in the second selection menu are photographs of the electronic consumer devices to be controlled by URC **2**. In another example, the second selection menu displays photographs of the remote control devices that control the corresponding electronic consumer devices. As illustrated in FIG. **4** and FIG. **4**A, after the user first selects device type VCR and brand name SAMSUNG from the first selection menu, the second selection menu displays photographs of all remote control devices that are used to control SAMSUNG VCR devices. This method is especially useful when the device type is TV. Televisions have similar appearances among different models. On the other hand, the appearances of remote control devices that control different models of televisions are usually different. Therefore, it may be easier for the user to pick and choose a particular brand and make of television by looking at the photographs of corresponding remote control devices of televisions.

There are thousands of electronic consumer devices and remote control devices available on the market. Each device is represented by a digital photograph which is stored as a digital image file. In the example of FIG. **1**, digital images **39** represent the digital image files of all electronic consumer devices and remote control devices. A digital image file may, for example, be a JPEG file. As a result, the size of digital images **39** is quite large. The content of digital images **39** also changes rapidly as manufacturers continue to make new devices and to phase out obsolete old ones. In one example, digital images **39** are stored in DVD disc **36** and are then uploaded by CPU **31** through DVD driver **34** when the second selection menu is displayed on display screen **30**. However, it is more cost effective to maintain and update digital images **39** in a central location such as an internet site. When the user selects a particular type and brand of electronic consumer devices from the first selection menu, PC **3** sends a request to download all digital image files of the selected type and brand of electronic consumer devices from the internet site. The downloaded digital photographs are then displayed on the second selection menu.

For some popular electronic device types and brands, there may be many pages of digital photographs to, be displayed. For instance, there may be dozens of different models of televisions are manufactured by Toshiba. It is therefore time consuming for the user to browse through all the pages of the second selection menu and select the right photograph. One way of improving the second selection menu is to prioritize each photograph based on market popularity of the corresponding device and to display the photograph in the order of its priority. Market popularity of a device is measured by number of unit sales, consumer rating, and other factors. The most popular models of the electronic consumer devices are then displayed first in the front page, thereby reducing the amount of time generally required by a user to select the proper digital photograph.

After the user confirms the selection of SAMSUNG DVD HD841, PC **3** sends (step **54** of FIG. **2**) codeset information **43** of the selected electronic consumer device HD841 to URC **2**. Codeset information **43** may be in various forms. In one example, codeset information **43** is a three-digit codeset identifier corresponding to SAMSUNG DVD HD841. URC **2** receives (step **55** of FIG. **2**) the codeset identifier from PC **3**. Microcontroller **21** of URC **2** then programs URC **2** to use a codeset corresponding to the received three-digital codeset identifier. After URC **2** has been programmed to use the

correct codeset stored in codeset database **23**, URC **2** is then able to send appropriate operational signals to control SAMSUNG DVD HD841.

In another example, codeset information **43** is the actual codeset of SAMSUNG DVD HD841. Instead of sending the codeset identifier, PC **3** sends the actual codeset of SAMSUNG DVD HD841 to URC **2**. In this example, URC **2** does not need to store the entire codeset database **23** in memory **22**. Instead, URC **2** receives the codeset from PC **3** and is programmed to use the codeset to control DVD HD841. The advantage of this method is that it saves memory space and reduces the cost of URC **2**. URC **2** only needs to have enough memory to store one or a small number of codesets, as opposed to an entire database of codesets.

The above illustrated method is convenient because URC **2** is programmed automatically after the user selects the photograph of the electronic consumer device or its corresponding remote control device. However, a typical hand held remote control device is only capable of one-way transmission, i.e., it only emits operational signals to control electronic consumer devices. In order to receive codeset information **43** automatically, URC **2** has to be able to do two-way communication. In the example of FIG. **1**, RCA jack **24** is included in URC **2**. PC **3** sends out codeset information **43** onto RCA jack **35**. URC **2** then receives codeset information **43** from RCA jack **24** through audio cable **30**. Aside from an audio connection, serial communication or wireless communication may also be used between URC **2** and PC **3**. Regardless of the type of communication, extra cost is required for URC **2** to receive codeset information **43**.

This extra cost in receiving codeset information **43** is eliminated in the following example. As illustrated in FIG. **2**, after the user confirms the selection of the image of SAMSUNG DVD HD 841 (step **53**), PC **3** displays a three digit codeset identifier of HD 841 on display screen **30** (step **54**A of FIG. **2**). The User manually programs URC **2** by entering the displayed codeset identifier into URC **2** (step **55**A of FIG. **2**). URC **2** is then programmed to control SAMSUNG HD 841 using the codeset corresponding to the displayed codeset identifier. Although the user is still involved in manually programming URC **2**, no extra cost is required to transmit the codeset identifier to URC **2**.

FIG. **5** is a diagram of a system **101** in accordance with one novel aspect. System **101** includes a universal remote control (URC) **102**, a set-top box **103**, a DVD player **104**, an audio home-theatre system **105**, and a TV **106**. Set-top box **103** includes a processor **112**, memory **113**, a RCA jack **115**, and a key interface **117**. Memory **113** includes an image-selection routine **114**. Set-top box **103** is either a satellite set-top box or a cable set-top box. A satellite set-top box communicates to a satellite **140** through a satellite dish **141**. A cable set-top box communicates to a central cable station **142** through a cable network. Set-top box **103** is controlled by a set-top remote control device **107**. Remote control device **107** emits operational signals **121** from IR transmitter **120** to control set-top box **103**. DVD player **104** includes an audio OUT RCA jack **116**. DVD player **104** is controlled by a DVD remote control device **108**. Remote control device **108** emits operational signals **123** from IR transmitter **122** to control DVD player **104**. URC **102** includes a microcontroller **130**, memory **131**, and an audio IN RCA jack **133**. Memory **131** includes a codeset database **132**. URC **102** emits operational signals **125** from IR transmitter **124** and is programmed to control a particular brand and make of electronic consumer device.

FIG. **5** illustrates a method of using DVD player **104** or set-top box **103** to program URC **102**, as compared to the use of PC **3** in FIG. **1**. In the example of using DVD player **104**, a user inserts DVD optical disc **111** into DVD player **104**. DVD player **104** plays DVD optical disc **111** and displays user interface **110** on TV **106**. The user then uses DVD remote control device **108** to select a particular, brand and make of electronic consumer device. In the example of FIG. **5**, digital images **143** represent digital image files of all electronic consumer devices and remote control devices. Digital images **143** are uploaded from DVD optical disc **111** and are displayed on the second selection menu, as illustrated in FIG. **4**. After the user confirms the selection of SAMSUNG DVD HD841, codeset information **153** is then transmitted to URC **102**. In the example of FIG. **5**, codeset information **153** is transmitted through an audio cable **150** from DVD player **104** to URC **102**. Audio cable **150** has two RCA plugs **151** and **152**, which are plugged into RCA jack **133** of URC **102** and RCA jack **116** of DVD player **104**. URC **102** receives codeset information **153** and is then programmed to control SAMSUNG DVD HD841 using the correct codeset. Alternatively, a codeset identifier of SAMSUNG HD841 is displayed on TV **106**, and the user programs URC **102** by entering the codeset identifier into URC **102**.

In the example of using a set-top box **103**, the method of configuring URC **102** is the same as described above with two differences. First, image-selection routine **114** is stored inside set-top box **103**. Processor **112** executes image-selection routine **114** and displays user interface **110** on TV **106** (sometimes TV **106** contains a built-in set-top box **103**). The user then uses remote control **107** to make selections. In some situation, set-top box **103** contains a key interface **117**, and the user used key interface **117** to make selections. Second, digital images **143** are not uploaded from a DVD disc. If set-top box **103** is a satellite set-top box, then digital images **143** are received from satellite **140** through satellite dish **141**. If set-top box **103** is a cable set-top box, then digital images **143** are received from a central cable station **142** through a cable network. Therefore, this method eliminates the need of providing local storage of all the digital images or of an extra DVD disc for the user to configure URC **102**.

URC **102** is not necessary a hand held remote control device. In one example, URC **102** is embedded inside set-top box **103**. URC **102** is programmed the same way as illustrated above. The only difference is that codeset information **153** is internally transmitted to URC **102** within set-top box **103**. After URC **102** has been programmed to control a particular electronic consumer device, set-top box **103** acts like an IR blaster to send out operational signals to control that particular electronic consumer device.

In one advantageous aspect, microcontroller **130** of URC **102** includes an on-chip analog-to-digital converter. The analog-to-digital converter is provided in the integrated circuit design of microcontroller **130** for use in other high-volume microcontroller applications (non-remote control device applications) of the microcontroller integrated circuit design. An analog input terminal of the microcontroller integrated circuit that is coupled to the input of the analog-to-digital converter is coupled to RCA jack **133** without substantial other interfacing circuitry between the microcontroller integrated circuit and the RCA jack. The analog-to-digital converter receives the signal on RCA jack **133**, digitizes it, and the processor within microcontroller **130** analyzes the digitized information and recovers codeset information **153**. Accordingly, the only significant cost that is added to the prior manufacturing cost of universal remote control **102** is the cost of providing the relatively inexpensive RCA jack **133**. RCA audio OUT jacks are already customarily supplied on DVD players and set-top boxes and home theatre systems and therefore do not represent an added cost to the typical user.

The RCA jack and cable mechanism of communicating codeset information therefore is a very inexpensive way of providing the user with a new ability to download codeset information automatically into a remote control device.

Furthermore, the illustrated method of programming a universal remote control device is not limited to outputting codeset information. In the example of FIG. **5**, besides codeset information, other device information including device description and device behavior characteristics can also be transmitted from set-top box **103** to URC **102**. Device description contains device brand, model, year of manufacturer and other related details of the device. Device behavior characteristics contain operational behavior of the device such as whether the device requires "ENTER" key after DIGIT entry for channel selection, and how long it will take from receiving POWER signal to the completion of power on process.

Although certain specific exemplary embodiments are described above in order to illustrate the invention, the invention is not limited to the specific embodiments. Accordingly, various modifications, adaptations, and combinations of various features of the described embodiments can be practiced without departing from the scope of the invention as set forth in the claims.

What is claimed is:

1. A method for configuring a universal remote control device comprising:

displaying a plurality of images on a display monitor, wherein each image of the plurality of images is an image of a corresponding respective one of a plurality of different devices, wherein each of the plurality of different devices is taken from the group consisting of: an electronic consumer device, and a remote control device usable to control an electronic consumer device, and wherein the plurality of images is displayed on the display monitor in a prioritized order based on a determined market popularity of the corresponding plurality of different devices;

receiving a selection of a one of the plurality of images displayed on the display monitor, wherein the one of the plurality of images selected is an image corresponding to a particular one of the plurality of different devices;

outputting codeset information associated with the particular one of the plurality of different devices, wherein the codeset information is taken from the group consisting of: a codeset and an identifier of a codeset; and

using the output codeset information associated with the particular one of the plurality of different devices in the universal remote control device to thereby configure the universal remote control device to command functional operations of the particular one of the plurality of different devices.

2. The method of claim **1**, wherein the step of using involves keying into the universal remote control device the identifier of a codeset as displayed on the display monitor.

3. The method of claim **1**, wherein the step of using involves loading the codeset information into the universal remote control device.

4. The method of claim **1**, wherein a video output device outputs video that is displayed on the display monitor, wherein a viewer of the plurality of images displayed on the display monitor uses a user input device to communicate with the video output device and to select said one of the plurality of images, and wherein the user input device is taken from the group consisting of: a remote control device, and a key interface on the video output device.

5. The method of claim **4**, wherein the video output device is taken from the group consisting of: an Internet Protocol TV, a satellite set-top box, a cable set-top box, an audio/video set-top box, a digital video disc (DVD) player, a digital video recorder, a media hub, a game console, and a personal computer.

6. The method of claim **4**, further comprising:

receiving a plurality of digital images onto the video output device, wherein each one of the plurality of digital images corresponds to a respective one of the plurality of images displayed on the display monitor, wherein the plurality of digital images is received onto the video output device at the same time that the video output device is outputting video that is displayed on the display monitor.

7. The method of claim **6**, wherein the plurality of digital images is received onto a satellite set-top box from a satellite dish.

8. The method of claim **6**, wherein the plurality of digital images is received onto a cable set-top box from a cable television network cable.

9. The method of claim **6**, wherein a plurality of digital images is stored on a set-top box, wherein each digital image of the plurality of stored digital images corresponds to a respective one of the plurality of images displayed on the display monitor.

10. The method of claim **9**, wherein the stored digital images are files of compressed image data.

11. The method of claim **1**, wherein a viewer of the plurality of images uses a user input device to communicate with the device monitor and to select said one of the plurality of images, and wherein the user input device is taken from the group consisting of: a remote control device, and a key interface on the display monitor.

12. The method of claim **1**, wherein the display monitor is a display of a personal computer, and wherein a viewer of the plurality of images uses the personal computer to make the selection that is then received onto the personal computer.

13. The method of claim **12**, further comprising:

receiving a plurality of digital images onto the personal computer, wherein each one of the plurality of received digital images corresponds to a respective one of the plurality of images displayed on the display monitor, and wherein the plurality of received digital images is received onto the personal computer from a network connection.

14. The method of claim **12**, further comprising:

receiving a plurality of digital images onto the personal computer, wherein each one of the plurality of received digital images corresponds to a respective one of the plurality of images displayed on the display monitor, wherein the plurality of received digital images is received onto the personal computer via a removable storage device, and wherein the plurality of received digital images is stored on the removable storage device.

15. The method of claim **1**, wherein each of the plurality of images displayed on the display monitor is a digital photograph.

16. The method of claim **1**, wherein the display monitor comprises a television set.

17. The method of claim **1**, wherein the step of using involves communicating the codeset information across an audio connector, wherein the audio connector is taken from the group consisting of: an audio jack, and an audio plug.

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